



STATE OF DELAWARE
DEPARTMENT OF TRANSPORTATION
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June 16, 2016

Contract No. T201407501.01

Removal of BR 2-357P Pedestrian Bridge over St. Jones River
Kent County

Ladies and Gentlemen:

Enclosed is Addendum No. 1 for the referenced contract consisting of the following:

1. The Bid Proposal Cover, revised, to be substituted for the same page in the Proposal.
2. One (1) page, Table of Contents, page iv, revised, to be substituted for the same page in the Proposal.
3. Twenty Eight (28) pages, Special Provision 605533-Cleaning Existing Steel Structures, Hazardous Base, (L.S.), pages 13-40, have been deleted from the Proposal.
4. Four (4) pages, Bid Proposal Forms, pages 1-4 revised, to be substituted for the same pages in the Proposal. Item Number 605533 has been deleted.
5. Expedite File, Addendum No. 1.

Please note the revision listed above and submit your bid based upon this information.

Sincerely,

signature on file

Robert A. Kovacs
Competitively Bid Contracts Coordinator

STATE OF DELAWARE



DEPARTMENT OF TRANSPORTATION

BID PROPOSAL

for

CONTRACT T201407501.01

REMOVAL OF BR 2-357P PEDESTRIAN BRIDGE OVER ST. JONES RIVER

KENT COUNTY

ADVERTISEMENT DATE: May 23, 2016

COMPLETION TIME: 68 Calendar Days

SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION
DELAWARE DEPARTMENT OF TRANSPORTATION
AUGUST 2001

Bids will be received in the Bidder's Room at the Delaware Department of Transportation's Administration Building, 800 Bay Road, Dover, Delaware until 2:00 P.M. local time **June 21, 2016**

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605533 - CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS BASE (L.S.)
605629 - CLEANING EXISTING STEEL STRUCTURES, HAZARDOUS BASE (S.F.)

Description:

This work consists of cleaning the entire existing steel structure(s) or a part of it as noted on the Plans; collection; stabilization; and transportation of the "spent material" (rust particles, paint particles and dust; material assumed to be hazardous waste), resulting from cleaning operations, to an approved disposal site(s). The work under this item shall be performed in accordance with these Special Provisions and attached Appendix A.

— Prior to the beginning of paint removal work, the Contractor shall set forth in detail and submit to the Delaware Department of Transportation (hereinafter referred to as Department), for approval, the proposed containment system (mini-containment system when only a part of the structure is to be cleaned as required) for complete capture, containment, collection and disposal of the "spent material" generated from paint removal work and testing by an outside laboratory, approved by the Department. The system shall be in compliance with these specifications, State, United States Environmental Protection Agency (EPA) and Occupational Safety and Health Act (OSHA) and other regulatory agencies with jurisdiction, rules, regulations, standards and guidelines in effect while the work is in progress. Upon approval, the plan shall be implemented to capture, contain, collect, and dispose of all "spent material".

— The Contractor shall not begin cleaning and/or blasting operation until he/she has submitted final documentation that he/she has an approved disposal site and permits for the handling, storing, and transporting of hazardous waste and nonhazardous waste; and shall be responsible to protect the environment, workers, and the public from toxic substances resulting from the paint removal operations.

Pre-Bid Conference:

Prior to the bid opening, a date will be set if deemed necessary by the Contract Administration (bidder will be notified at the time of purchasing contract documents) for a pre-bid conference to alert the potential bidder to comply with the directives established by the OSHA, EPA and the State of Delaware during and after the execution of this item. It is recommended that the bidder (Prime Contractor) brings his/her Sub-Contractor to be engaged in removing the paint if he/she cannot perform the work of this item.

Materials:

— The Contractor shall use recyclable metallic shot and metallic grit meeting the requirements of SSPC AB2 and SSPC AB3 as abrasive materials for removing paint.

— Other removal and cleaning methods after approval may be used by the Contractor provided he/she can demonstrate that the proposed method satisfies all the safety and environmental requirements of this specification and provides a cleaned surface satisfactory to the Engineer.

Construction Requirements:

Containment System:

— Prior to commencing any cleaning operations, the Contractor shall prepare a Cleaning Contaminant System for the capture, containment, collection and storage of the waste generated by the work, which includes abrasive blasting residue, spent blasting mediums, rust, paint particles, dust, etc.

— The Containment System must be capable of containing the waste and resulting residue generated by the work. The Contractor shall strive to achieve total containment (100%), and is required to meet all Federal, State, City and Local regulations using the best available technology as applicable to each bridge site. The Containment System shall meet the requirements of SSPC Guide 6, Class 1A. Visible emissions in excess of SSPC Guide 6, Level 1 (one percent in the work day) shall be cause for immediate shut down until corrections are made. While on the site, tarps shall be held securely in place, and kept sealed at all times during water blasting, paint removal and painting.

For bridges over water, the Containment System shall include a skimming boom consisting of a float with a skirt to collect floating debris. Also, an approved capturing device such as floating curtain, screen or tarp shall be placed under and down wind of the bridge to catch rust, sand and paint particles, and the waste material collected on the capturing device shall be cleaned daily.

— Prior to commencing work the Contractor must submit working drawings of the proposed containment system to the Department within 14 days from Notice of Award. The Department will review the drawings and evaluate the system as to its effect on the loading capacity of the existing structure. The Contractor shall also submit the design of the systems to be employed, including an analysis of the dead, live and wind loads which will be added to the existing structure by the containment system and blast waste. The load analysis shall be performed and stamped by a licensed Professional Engineer registered in the State of Delaware and experienced in bridge analysis. The analysis shall assure that the system will not induce a load on the bridge which will create an overstress condition or otherwise effect the structural integrity of the bridge. For bridges 23 feet (7 meters) or greater in height, the containment system submittals shall include a safety net meeting OSHA requirements in 29 CFR 126.105, 29 CFR 126.106, and 29 CFR 126.104. For bridges less than 23 feet (7 meters) in height, the submittals shall include necessary safety measurements such as safety harnesses, lifelines and lanyards meeting OSHA requirements in 29 CFR 126.104. In no case shall the containment system, safety devices, or equipment encroach upon the minimum bridge clearances shown on the Plans, unless otherwise approved by the Engineer.

— The following guidelines shall be followed by the Contractor in preparing the Containment Drawing Plans. However, the Contractor may submit for approval a self-contained and self-supporting blast and recovery system as an alternative option for removing the paint:

- 1. Working drawings with Professional Engineer Seal shall be submitted by the Contractor meeting the requirements of Subsection 105.04 of the Standard Specifications.
- 2. The working drawings shall show Containment System in plan & elevation views including details of clips and hangers.
- 3. The working drawings shall indicate maximum permissible load of abrasive or waste permitted on the Containment System.
- 4. The working drawings shall indicate if vehicles with abrasive and waste will be permitted on the bridge; if so indicate allowable load and locations. Vehicle and equipment loads may not be permitted behind abutments if surcharging results.
- 5. The working drawings shall indicate all restrictions on bridge including any load posting.
- 6. Permanent attachments or fasteners to the bridge will not be permitted.
- 7. The working drawings shall show the location(s) of skimming boom(s) if the bridge is over water.
- 8. The working drawings shall identify all containment system components; and shall indicate all rigid framework, work platform and scaffolding.
- 9. All curtains, screens or tarps used for containment shall be weighted down.
- 10. No load shall be attached to the bridge railings unless railing is in good condition, and details and calculations showing loading are approved by the Department.

— With submission of the Containment System Drawing, the Contractor shall be required to develop and submit for approval an Effective Safety Program to be followed during the paint removal period. The Contractor's employees, before being engaged in paint removal work, must have proper training in accordance with the OSHA General Industry Standard.

— The review and acceptance of the working drawings by the Department shall in no way relieve the Contractor of any responsibility for obtaining the required degree of capture, containment and collection.

Cleaning of Containment System must be properly maintained while work is in progress and shall not deviate from the approved working drawings without prior approval of the Engineer. Air within the containment structure shall be exhausted rapidly to maintain a slight negative pressure, so that outside air is drawn in through specifically designed openings rather than having contaminated air leaking from inside the containment. Also, sufficient fresh air must be circulated so that dust is reduced to enable good visibility for the operator. Public access to all rigging, scaffolding and the containment systems must be denied at all times.

Air Monitoring for PM 10 and TSP-Lead:

— The intent of the monitoring requirements in this specification is for the Contractor to establish a baseline background reading for the area(s) in proximity to steel cleaning. This specification also requires the Contractor to perform all of the testing required to ensure that lead particles are adequately contained and captured by the Contractor's steel cleaning operations. All costs associated with this work are included in the Contractor's bid price.

— The Contractor shall engage a consultant responsible for conducting air monitoring work during the operation of the paint removal period; monitoring shall be conducted on the area downwind of the lead control area. The qualification of the consultant shall be approved by the Department prior to his/her engagement in air monitoring service. The air quality standard shall be monitored in accordance with National Ambient Air Quality Standards (NAAQS). At a minimum this containment system shall achieve a SSPC level 1 Standard Emissions level.

— Baseline Monitoring shall take place at each structure where the Contractor is required to clean the existing steel in order to establish preconstruction background readings for the area(s) involved. Baseline Monitoring shall occur for a minimum of 3 consecutive calendar days before the steel cleaning begins. The Contractor shall conduct the monitoring so that the monitored hours match the proposed work schedule for the contract, including nightwork. The minimum duration of the monitoring for each calendar day must be 8 hours, regardless of the Contractor's proposed work schedule. The required sampling type shall be 2 (two) PM-10 and 2 (two) TSP-Lead and the Engineer must approve the locations of the sampling. During lead paint removal, air monitoring shall commence just prior to the start of any lead removal operation and shall continue whenever the contractor is cleaning steel under this item. The required sampling type shall be PM-10 and TSP-Lead and the Engineer must approve the locations of the sampling. If problems with containment occur, the Engineer will require the air monitoring to be reinstalled at the Contractor's expense.

— The acceptance level for PM 10 (particles with an aerodynamic diameter less than or equal to a nominal 10 micrometers) shall be 150 micrograms per cubic meter of air for 24-hour average concentration (450 micrograms per cubic meter of air over an eight-hour period assuming no emissions occur from the project for the remaining 16 hours).

— The acceptance level for Total Suspended Particulate Matter (TSP) lead emissions shall be 1.5 micrograms per cubic meter of air averaged over a calendar quarter of the year, which can be converted as noted below to achieve daily lead level allowance during the project operation:

$$DA = \frac{90}{PD} \times 1.5 \mu\text{g}/\text{m}^3, \text{ where}$$

DA = Daily Allowance ($\mu\text{g}/\text{m}^3$)

PD = Number of paint removal operation days anticipated in a 90-day period.

— For example, if it is expected that 30 days out of 90 will be worked, the TSP lead emission criteria for each of those days would be $4.5 \mu\text{g}/\text{m}^3$, over a 24-hour period ($90/30 \times 1.5$). However, since the paint removal operation will not continue for the full 24 hours, this level of emissions can be increased using the following formula:

$$ADA = DA \times \frac{24}{H}, \text{where}$$

ADA = Adjusted Daily Allowance ($\mu\text{g}/\text{m}^3$)

H = Hours worked in 24 hours.

— Using the above example, if the paint removal operation is continued for eight hours out of each 24-hour workday, the ADA will be $13.5 \mu\text{g}/\text{m}^3$ ($4.5 \mu\text{g}/\text{m}^3 \times 24/8$). Thus, $13.5 \mu\text{g}/\text{m}^3$ could be emitted during the eight hours of work, provided no emissions occur during the remaining 16 hours.

— The size of the containment system shall be a work area approximately equivalent to what a work crew can blast clean, inspect, paint and move in a 24 hour period. The Engineer may permit a larger containment system if the Contractor can demonstrate that such a system will increase productivity and not interfere with the flow of traffic. When dust leaks are noted in the containment system, repairs shall be made as soon as possible.

— If at any time during the execution of the work, the cleaning containment system fails to function at the required level of efficiency, the Contractor must immediately suspend all operations except those intended to minimize the adverse impact to the environment. Operations shall not resume until modification have been made to correct the cause of the failure.

— The Contractor shall have a full time hygienist on the job site during lead paint removal activities to insure required hygiene procedures are being followed.

Cleaning:

— All structural steel surfaces shall be cleaned and free of all rust, rust scale, mill scale, paint or other foreign matter in accordance with the requirements of SSPC-SP10:

— Should the Contractor elect to use wet or water-vapor sandblasting, the water shall contain 0.32 percent of sodium nitrate and 1.28 percent by weight of ammonium phosphate for the purpose of inhibiting the development of rust.

— No visible lead containing residue, debris, or paint chips shall remain or be present outside the containment area upon the completion of the abatement cleanup. Visible lead containing residue, debris, or paint chips outside the containment area shall be cleaned up immediately.

— The type of containment systems used when cleaning steel shall be Class 1A for abrasive blasting and Class 2P for Power Tool Cleaning as per SSPC - Guide 6 "Guide for Containing Debris Generated During Paint Removal Operations".

Collection, Storage and Disposal of Hazardous and Non-Hazardous Waste:

— All waste discharged and collected from the Containment System must be protected in a manner so as to prevent migration of the waste into the environment; and the Contractor shall abide by all Federal and State regulations relating to collection, storage and disposal of the hazardous waste and solid waste.

— The Contractor shall provide a clean up area with soap, water and container for collection and disposing of the hazardous waste at each work site. The Contractor shall obtain a permit for hauling the hazardous waste from the State Department of Natural Resources and Environmental Control (DNREC).

— Each day the Contractor shall collect and contain waste material in sealed 55 gallon (208 liter) open head type drums (I.C.C. Specification 17-H). All drums shall be in new condition and approved for use by the Engineer. Drums shall be labeled with the words "HAZARDOUS WASTE" and tagged in accordance with all State regulations including bridge number, Contract number, Contractor's name, contents and the date when waste accumulation in the drum begins. No more than 29 drums of hazardous material shall be kept at the site of each bridge.

The waste to be placed in drums also includes all filters used in abrasive blasting equipment and vacuum power tools for removing hazardous and nonhazardous paint waste; these filters shall be removed when the Contract is complete. At the end of the Contract all such filters shall be removed from equipment used on the project and placed in drums with other hazardous waste for proper disposal.

— At the end of each working day the Contractor shall haul the waste material contained and collected to an approved temporary secure accumulation site. This site must be approved by the Engineer and be maintained in a secured condition by the Contractor. Hauling of hazardous waste must be performed by a license hauler.

— The accumulation site must be capable of preventing the migration of the lead contaminated waste material into the environment. The accumulation area must also provide protection from vandalism and unauthorized access by the general public. At the completion of the work and in the presence of the Engineer, the Contractor shall take representative samples of the accumulated residues collected at each bridge.

— The storage site must be capable of preventing the migration of the lead contaminated waste material into the environment. The storage area must also provide protection from vandalism and unauthorized access by the general public. At the completion of the work, the Contractor shall take representative samples of the accumulated residues collected at each bridge to be analyzed for lead content.

— Samples exceeding 5 PPM (parts per million) according to the Toxicity Characteristics Leaching Procedure (TCLP) test shall be considered a hazardous waste and disposed of as hazardous waste. If the sample's toxicity level has dropped to 5 ppm or less, then the waste can be transported and disposed of as industrial waste, provided it is stabilized.

— In order to stabilize the industrial waste (below the toxicity level), a slurry made from Portland Cement (10% of waste by volume) and water (50% of cement by volume) shall be added to the waste and thoroughly mixed at the disposal site by the licensed hazardous waste hauler. In no case shall blasting debris or dust collector waste be directly disposed of as an industrial waste. They shall either be stabilized or disposed of as a hazardous waste, irrespective of the results of the TCLP Test.

— The samples shall be delivered to a laboratory approved by the Department for testing according to the Toxicity Characteristic Leaching Procedure (TCLP). Should test results indicate and if the contaminants listed in the following are above their respective regulatory limits, the residue shall be deemed a hazardous waste, and must be treated before disposal.

EPA HAZARDOUS WASTE NO.	CONTAMINANT	CAS NO.	REGULATORY LEVEL (mg/L)
D004	Arsenic	7440-38-2	5.0
D005	Barium	7440-39-3	100.0
D006	Cadmium	7440-43-9	1.0
D007	Chromium	7440-47-3	5.0
D008	Lead	7439-92-1	5.0
D009	Mercury	7439-97-6	0.2
D010	Selenium	7782-49-2	1.0
D011	Silver	7440-22-4	5.0

— The Contractor shall remove from the accumulation site all treated waste within 90 days from the date of accumulation, and be transported to an industrial dump facility approved by the Delaware Department of Natural Resources and Environmental Control for disposal of such waste. A copy of the completed waste manifest (signed and dated by the Contractor and the Engineer at the site) shall be forwarded to the Department.

Method of Measurement:

— For item 605533, the quantity of cleaning existing steel structures will not be measured. For item 605629, the quantity of cleaning existing steel structures will be measured by the square foot (square meter) of area cleaned and accepted.

Basis of Payment:

— For item 605533, the quantity of cleaning existing steel structures will be paid for at the Contract lump sum. For item 605629, the quantity of cleaning existing steel structures will be paid for at the Contract unit price per square foot (square meter).

— Price and payment shall constitute full compensation for furnishing and installing all materials, working drawings and Professional Engineer's service, Containment System, collection and temporary storage of the waste material as required, air monitoring service including consulting services, testing materials for contaminants, cleaning the structure, revisions and resubmissions of the Containment Plan and or Systems that may be required during the execution of the work, for providing respiratory protection and protective clothing to the worker and Department employee at the time of inspection, hygiene facilities, for stabilizing the hazardous material and transporting and disposing of the stabilized waste complying with all the requirements as described herein in these special provisions, for all labor, equipment, tools and necessary incidentals to complete the work.

NOTE

— The latest issue, revision, or amendment of the references noted below shall govern in execution of this item unless otherwise noted. **If there is a conflict between the attached Appendix A of this Special Provisions and the references noted below, the latter shall prevail.**

1. Steel Structures Painting Council (SSPC) Standards

- SSPC-AB2 — Specification for Cleanliness of Recycled Ferrous Metal Abrasive
- SSPC-AB3 — Specification for Newly Manufactured Steel Abrasive.
- SSPC-QP 1 — Standard Procedure for Evaluating Qualifications of Painting Contractors
- SSPC Guide 61 — Guide for Containing Debris Generated During Lead Paint Removal Operations
- SSPC Guide 7 (DIS) — Guide for the Disposal of Lead-Contaminated Surface Preparation Debris

2. U.S. Government Code of Federal Regulations

- — 29 CFR, Part 1926.62, Safety and Health Regulations for Construction
- — 40 CFR, Subchapter I, "Solid Wastes" (parts 260-263, and 268)

3. American National Standards Institute (ANSI)

- ANSI/ASC Z9.4 For Exhaust Systems Abrasive Blasting Operations -- Ventilation and Safe Practice

4. State of Delaware

- — 7 Del. C., chapter 63 - Hazardous Waste Management Act
- — The Delaware Regulations Governing Hazardous Waste (DRGHW)
- — 7 Del. C., Chapter 60 - Delaware Water and Air Resources Act
- — The Delaware Regulations Governing Solid Waste (DRGSW)

Contract No. T201407501.01

SPECIAL NOTICE TO CONTRACTORS

~~The following documentation will be required with the Bid Proposal Form. If this documentation is not submitted with the bid, the bid will be considered Non-responsive:~~

~~Proof is required that the Prime Contractor, if he/she is performing the cleaning/painting operation, and any cleaning/painting Subcontractors are certified by the Steel Structures Painting Council (SSPC) Painting Contractor Certification Program (PCCP) QP-1 and QP-2. Such certification shall be for the duration of the project.~~

~~3/17/09~~

APPENDIX A

**OCCUPATIONAL SAFETY AND HEALTH STANDARD FOR OCCUPATIONAL
EXPOSURE TO LEAD DURING CONSTRUCTION**

~~The regulations specified under the following topics and as described herein shall be followed by the Contractor, engaged in removing and cleaning lead base paint from the steel structures. This Appendix is considered as part of the Special Provisions for Items 605629 and 605533 - Cleaning Existing Steel Structures and 605614 and 605618 - Cleaning Existing Steel Structures with Vacuum Power Tools.~~

- ~~.01 Scope and Application~~
- ~~.02 Definitions~~
- ~~.03 Permissible Exposure Limit (PEL)~~
- ~~.04 Initial Determination and Exposure Monitoring~~
- ~~.05 Methods of Compliance~~
- ~~.06 Respiratory Protection~~
- ~~.07 Protective Work Clothing and Equipment~~
- ~~.08 Housekeeping~~
- ~~.09 Hygiene Facilities and Practices~~
- ~~.10 Medical Surveillance Program~~
- ~~.11 Medical Examinations and Consultations~~
- ~~.12 Medical Removal Protection~~
- ~~.13 Employee Information and Training~~
- ~~.14 Signs~~
- ~~.15 Recordkeeping~~
- ~~.16 Observation of Monitoring~~

.01 Scope and Application

- ~~A. This Appendix applies to occupational exposure to lead of every employee engaged in construction work. Each employer shall protect the employment and places of employment of each employee engaged in construction work by complying with the Appendix.~~
- ~~B. Compliance with this Appendix does not preclude or preempt the applicability of any other regulations or standards.~~

.02 Definitions

~~For the purpose of this Appendix certain words and terms are defined as follows:~~

~~A. Lead~~

- ~~(1) "Lead" means metallic lead, all inorganic lead compounds, and organic lead soaps.~~
- ~~(2) "Lead" does not include any other organic lead compounds.~~

B. "PEL" means Permissible Exposure Limit.

C. "TWA" means Time Weighted Average.

D. All references to "the Employer" herein shall mean "the Contractor", and all references to the Employee(s) shall mean "the Department's and Contractor's Employees".

.03 Permissible Exposure Limit (PEL)

A. The employer shall ensure that no employee is exposed to lead at concentrations greater than 50 micrograms per cubic meter of air averaged over an 8-hour period.

B. When an employee is exposed to lead for more than 8 hours in any work day, the employer shall use the following formula to reduce the permissible exposure limit, as a time weighted average (TWA) for that day: Maximum permissible limit (in micrograms/cubic meter) = 400 divided by hours worked in the day.

C. Respirators. When respirators are used to supplement engineering and work practice controls to comply with the PEL and in accordance with the requirements of Regulation .06, the employer, for the purpose of determining compliance with the PEL, may:

- (1) — Consider employee exposure to be at the level provided by the protection factor of the respirator for those periods the respirator is worn; and
- (2) — Average those periods with exposure levels during periods when respirators are not worn to determine the employee's daily TWA exposure.

.04 Initial Determination and Exposure Monitoring

A. General

- (1) — For the purpose of this regulation, employee exposure is that exposure which would occur if the employee were not using a respirator.
- (2) — Personal Samples:
 - (a) — With the exception of monitoring under Section C, below, the employer shall collect personal samples for the entire time during the shift when lead exposure may occur.
 - (b) — The personal samples shall:
 - (i) — Include at least one sample for every job classification in each work area during each shift; and
 - (ii) — Be representative of the monitored employee's regular, daily exposure to lead.

B. Initial Determination:

- (1) — An employer having a jobsite covered by this chapter shall determine before the beginning of potential exposure to lead if an employee may be exposed to lead at or above the PEL level.
- (2) — Written record:
 - (a) — The employer shall:
 - (i) — Make a written record of the determination; and
 - (ii) — Post the record in a place accessible to employees.
 - (b) — At a minimum, the record shall include:

- ~~_____ (i) _____ The information specified in Section C, below;~~
- ~~_____ (ii) _____ The date of determination;~~
- ~~_____ (iii) _____ Location of the jobsite;~~
- ~~_____ (iv) _____ Process;~~
- ~~_____ (v) _____ Materials;~~
- ~~_____ (vi) _____ Location within the jobsite; and~~
- ~~_____ (vii) _____ The name and social security number of employees monitored.~~

~~C. Basis of Initial Determination.~~

- ~~_____ The employer shall base an initial determination on any of the following, relevant considerations:~~
- ~~_____ (1) _____ Information, observation, calculations, or anticipated operations which indicate employee exposure to lead;~~
 - ~~_____ (2) _____ Previous measurements of airborne lead and analytical methods meeting the criteria of Section I, below; and~~
 - ~~_____ (3) _____ Other indications of potential lead exposure.~~

~~D. Positive Initial Determination and Initial Monitoring.~~

- ~~_____ (1) _____ When a determination conducted under Sections B and C, above, shows the possibility of employee exposure at or above the PEL level, the employer shall conduct exposure monitoring immediately at the start of the operation which may involve lead exposure.~~
- ~~_____ (2) _____ The monitoring shall be representative of the exposure for each employee in the workplace who is exposed to lead.~~
- ~~_____ (3) _____ When the type of jobsite, process, and materials involved has not changed, measurements of airborne lead, taken in accordance with Section I, below, and made during the preceding 12 months may be used to satisfy this requirement.~~

~~E. Negative Initial Determination.~~

- ~~_____ When the employer determines, in accordance with Sections B and C, above, that no employee is exposed to airborne concentrations of lead at or above the PEL level, the employer shall make a written record of the determination in accordance with Section B.~~

~~F. Frequency.~~

- ~~_____ Except as required by Section G, below, when the initial determination or subsequent monitoring reveals employee exposure:~~
- ~~_____ (1) _____ Above the PEL, the employer shall conduct monitoring quarterly until at least two consecutive measurements, taken at least 7 days apart, are at or below the PEL.~~

~~G. Additional Monitoring.~~

- ~~_____ (1) _____ When there is either a production, jobsite, material, process, control, or personnel change which may result in new or additional lead exposure or any other reason to suspect a change, which may result in new or additional exposures to lead, the employer shall conduct additional monitoring in accordance with this chapter.~~

- (2) — ~~When an employee complains of symptoms which may be attributable to exposure to lead, the employer shall conduct personal monitoring representative of the exposure to each employee in the affected job classification or performing the same operation who may be exposed to lead.~~

H. Employee Notification:

- (1) — ~~Within 5 working days of the receipt of any monitoring results, the employer shall notify each employee in writing of the results which represent that employee's exposure.~~
- (2) — ~~Whenever the results indicate that the representative employee exposure, without regard to respirators, exceeds the PEL, the employer shall include in the written notice:~~
 - (a) — ~~A statement that the PEL was exceeded; and~~
 - (b) — ~~A description of the corrective action that has been, or will be, taken to reduce exposure to a level at or below the PEL.~~

I. Accuracy of Measurement:

- ~~The employer shall use a method of monitoring and analysis which has an accuracy, to a confidence level of 95 percent, of not less than plus or minus 20 percent for airborne concentrations of lead equal to or greater than 50 micrograms/cubic meter averaged over an 8-hour period.~~

.05 Methods of Compliance

A. Engineering and Work Practice Controls:

- (1) — ~~When any employee is exposed to lead above the PEL, the employer shall implement engineering and work practice controls, including administrative controls, to reduce and maintain employee exposure to lead, except to the extent that the employer can demonstrate that these controls are not feasible.~~
- (2) — ~~When the engineering and work practice controls which can be instituted are not sufficient to reduce employee exposure to a level at or below the PEL, the employer shall:~~
 - (a) — ~~Use them to reduce exposure to the lowest feasible level; and~~
 - (b) — ~~Supplement them by the use of respiratory protection which complies with the requirements of Regulation .06.~~

B. Compliance Program

- (1) — ~~Each employer shall establish and implement a written compliance program to reduce exposure.~~
- (2) — ~~Written Program. The written compliance program shall, at a minimum, include:~~
 - (a) — ~~A description of each operation in which lead is expected, including~~
 - (i) — ~~Equipment used;~~
 - (ii) — ~~Materials used;~~
 - (iii) — ~~Controls in place;~~
 - (iv) — ~~Crew size;~~
 - (v) — ~~Employee job responsibilities;~~
 - (vi) — ~~Operating procedures; and~~
 - (vii) — ~~Maintenance practices;~~

- ~~(b) A description of the specific means that will be employed to achieve compliance;~~
- ~~(c) A report of the technology considered in meeting the PEL;~~
- ~~(d) A work practice program which includes items required under Regulations .07,.08, and .09;~~
- ~~(e) The administrative control schedule required by Section C, if applicable; and~~
- ~~(f) Other relevant information.~~
- ~~(3) Written programs shall be:~~
 - ~~(a) Submitted upon request to the Department; and~~
 - ~~(b) Available at the jobsite for examination and copying by the Department, any affected employee, or authorized employee representative.~~
- ~~(4) At least every 6 months, the employer shall:~~
 - ~~(a) Review the written compliance program; and~~
 - ~~(b) If necessary, revise it to reflect the current status of the program.~~

~~C. Administrative Controls:~~

- ~~If administrative controls are used as a means of reducing employee TWA lead exposure, the employer shall establish and implement a job rotation schedule which includes:~~
- ~~(1) The name or identification number of each affected employee;~~
 - ~~(2) The duration and the exposure level at each job or work station where an affected employee is located; and~~
 - ~~(3) Any other information which may be useful in assessing the reliability of administrative controls in reducing exposure to lead.~~

.06 Respiratory Protection

A. General:

- ~~(1) When this chapter requires the use of respirators, the employer shall:~~
 - ~~(a) Provide respirators that comply with the requirements of this regulation, at no cost to the employee; and~~
 - ~~(b) Ensure their use.~~
- ~~(2) Respirators shall be used:~~
 - ~~(a) During the time period necessary to install or implement engineering or work practice controls;~~
 - ~~(b) In a work situation in which engineering and work practice controls are not sufficient to reduce exposure to a level at or below the PEL; and~~
 - ~~(c) Whenever an employee requests a respirator.~~

B. Respirator Selection:

- (1) — When a respirator is required under this chapter, the employer shall select the appropriate respirator or combination of respirators in accordance with this section from Table I. Respiratory Protection for Lead Aerosols.
- (2) — Powered Air-Purifying Respirators: The employer shall provide a powered air-purifying respirator instead of the respirator specified in Table I Respiratory Protection for Lead Aerosols whenever:
 - (a) — An employee chooses to use this type of respirator; and
 - (b) — This respirator will provide adequate protection to the employee.
- (3) — The employer shall select respirators from among those approved for protection against lead dust, fume, and mist by the Mine Safety and Health Administration (MSHA) and the National Institute for Occupational Safety and Health (NIOSH) under the provisions of 30 CFR Part II.

C. Respirator Usage:

- (1) — The employer shall ensure that the respirator issued to the employee:
 - (a) — Exhibits minimum facepiece leakage; and
 - (b) — Is fitted properly.
- (2) — Fit Test:
 - (a) — For each employee wearing a negative pressure respirator, the employer shall perform either a quantitative or qualitative face fit test:
 - (i) — At the time of initial fitting; and
 - (ii) — Minimally, every 6 months after that.
 - (b) — The qualitative fit test:
 - (i) — May be used only to test the fit of a half-mask respirator when it is otherwise permitted to be worn; and
 - (ii) — Shall be conducted in accordance with the directive set in 29 CFR 1926.62.
- (c) — The tests shall be used to select facepieces that provide the protection prescribed in Table I. Respiratory Protection for Lead Aerosols.

TABLE I. RESPIRATORY PROTECTION FOR LEAD AEROSOLS

Airborne concentration of lead or condition of use	Required respirator [†]
Not in excess of 0.5 milligram/cubic meter (10X PEL).	Half-mask, air-purifying respirator equipped with high efficiency filters. ^{2,3}
Not in excess of 1.25 milligram/cubic meter (25 x PEL)	Hood or helmet supplied air respirator operated in a continuous flow mode.
Not in excess of 2.5 milligram/cubic meter (50X PEL).	(1) Full facepiece, air-purifying respirator with high efficiency filters. ³

	(2) Any powered, air-purifying respirator with high efficiency filters. ³
Not in excess of 50 milligram/cubic meter (1000x PEL):	Half-mask, supplied-air respirator operated in positive-pressure mode ² .
Not in excess of 100 milligrams/cubic meter (2000X PEL):	Supplied-air respirators with full facepiece, hood, helmet, or suit, operated in positive pressure mode.
Greater than 100 milligrams/cubic meter, unknown concentration or fire fighting:	Full facepiece, self-contained breathing apparatus operated in positive-pressure mode.

—¹Respirators specified for high concentrations can be used at lower concentrations of lead.

—²Full facepiece is required if the lead aerosols cause eye or skin irritation at the use concentrations.

—³A high efficiency particulate filter means 99.97 percent efficiency against 0.3 micron size particles. Certain Specific Type CE blast helmets can be used in atmospheres that are 1000x PEL.

— (3) — If an employee exhibits difficulty in breathing during the fit test or during use, the employer shall make available to the employee an examination in accordance with Regulation 11A(2) to determine whether the employee can wear a respirator while performing the required duty.

D. Respirator Program:

— (1) — The employer shall institute a respiratory protection program in accordance with the applicable section(s) of 29 CFR 1926.62, 29 CFR 1926.1127, and 29 CFR 1910.134.

— (2) — The employer shall:

— (a) — Permit an employee who uses a filter respirator to change the filter elements when an increase in breathing resistance is detected;

— (b) — Use identification of filters, cartridges and canisters with NIOSH color coded approved labels as required;

— (c) — Maintain an adequate supply of filter elements for this purpose; and

— (d) — Permit an employee who wears a respirator to leave the work area to wash his or her face and respirator facepiece when necessary to prevent skin irritation associated with respirator use.

— (e) — Record Keeping - Records must be kept and available in accordance with 29CFR 1910.20 and include medical evaluation, fit testing, and a copy of the respiratory protection program.

.07 Protective Work Clothing and Equipment

A. Provision and Use:

— When an employee is exposed to lead above the PEL, without regard to the use of respirators, or when the possibility of skin or eye irritation exists, the employer shall:

— (1) — Provide, at no cost to the employee, appropriate protective work clothing and equipment, such as, but not limited to:

— (a) — Coveralls or similar full-body work clothing;

— (b) — Shoes or disposable shoe coverlets, gloves, and hats;

(c) ~~Face shields, vented goggles, or other appropriate protective equipment which complies with the applicable section(s) of 29 CFR 1926.62.~~

~~(2) Ensure that the employee uses the appropriate protective clothing and equipment.~~

~~B. Cleaning and Replacement.~~

~~The employer shall:~~

~~(1) Provide the protective clothing required in Section A -~~

~~(a) In a clean and dry condition;~~

~~(b) Daily to an employee whose exposure level, without regard to a respirator, is over 200 micrograms/cubic meter of lead as an 8-hour TWA, and~~

~~(c) At least weekly to other employees;~~

~~(2) Provide for the cleaning, laundering, or disposal of protective clothing and equipment required by Section A;~~

~~(3) Repair or replace required protective clothing and equipment as needed to maintain their effectiveness;~~

~~(4) Ensure that employees remove all protective clothing:~~

~~(a) At the completion of a work shift, and~~

~~(b) Only in designated change areas;~~

~~(5) Ensure that contaminated protective clothing which is to be cleaned, laundered, or disposed of, is placed in a closed container which:~~

~~(a) Is located in the designated change area, and~~

~~(b) Will prevent dispersion of lead;~~

~~(6) Inform, in writing, any person who cleans or launders protective clothing or equipment of the potentially harmful effects of exposure to lead;~~

~~(7) Ensure that a container required by Section B(5), above, is labelled as follows:~~

~~**CAUTION: CLOTHING CONTAMINATED WITH LEAD. DO NOT REMOVE DUST BY BLOWING OR SHAKING. DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE LOCAL, STATE, OR FEDERAL REGULATIONS;** and~~

~~(8) Prohibit the removal of lead from protective clothing or equipment by blowing, shaking, or any other means which disperses lead into the air.~~

~~.08 Housekeeping~~

~~A. Surfaces:~~

~~An employer shall maintain all surfaces as free as practicable of accumulations of lead.~~

~~B. Cleaning Floors:~~

~~(1) An employer shall vacuum floors and other surfaces where lead accumulates.~~

- (2) — When vacuuming or other equally effective methods are not feasible, an employer shall use wet methods, including wet sweeping, wet shovelling, or wet brushing.
- (3) — Floors and other surfaces where lead accumulates may not be cleaned by the use of compressed air.
- (4) — An employer may use dry methods only when vacuuming and wet methods are not practicable.

C. Vacuuming.

- When vacuuming methods are used, the employer shall ensure that the vacuums are equipped with HEPA filters are used and emptied in a manner which minimizes the re-entry of lead into the workplace.

.09 Hygiene Facilities and Practices.

- A. For the purpose of this regulation, employee exposure is that exposure which would occur without regard to the use of a respirator.

- B. The employer shall ensure that in an area where employees are exposed to lead above the PEL:

- (1) — Neither food nor beverage is present or consumed;
- (2) — Tobacco products are not present or consumed; and
- (3) — Cosmetics are not applied.

C. Designated Change Areas.

- (1) — The employer shall provide clean designated change areas for employees who work in areas where their airborne exposure to lead is above the PEL.
- (2) — The employer shall ensure that designated change areas are equipped with separate storage facilities for protective work clothing and equipment and for street clothes, sufficient to prevent cross-contamination.

D. Washing Facilities.

- (1) — The employer shall ensure that employees who work in areas where their airborne exposure to lead is above the PEL, shower or wash at the end of the work shift.
- (2) — The employer shall provide washing facilities in accordance with the applicable section(s) of 29 CFR 1926.62.
- (3) — The employer shall ensure that employees who are required to shower or wash pursuant to Section D(1) do not leave the jobsite wearing any clothing or equipment worn during the work shift.

E. Food and Beverage Consumption Areas.

- The employer shall:

- (1) — Provide employees who work in areas where their airborne exposure to lead is above the PEL with food and beverage consumption areas:
 - (a) — Sufficiently removed from the affected work area; and
 - (b) — Readily accessible to employees; and

(2) ——— Ensure that employees who work in areas where their airborne exposure to lead is above the PEL, wash their hands and face prior to eating, drinking, smoking, or applying cosmetics.

— (3) ——— Ensure that employees who work in areas where their airborne consumption areas with protective work clothing or equipment unless surface lead dust has been removed by vacuuming or other cleaning methods.

F. Lavatories.

— The employer shall provide an adequate number of lavatory facilities which comply with the applicable section(s) of 29 CFR 1926.62.

.10 Medical Surveillance Program.

A. General.

— (1) ——— The employer shall institute a medical surveillance program for all employees who are or may be exposed above the PEL level. A blood test to determine the lead level is required for all employees before engaged in operation of removing/cleaning the paint. The Department is responsible for its employees for blood test; however, the Contractor shall be responsible for his workers for such test.

— (2) ——— The employer shall ensure that all medical examinations and procedures are performed by, or under the supervision of, a licensed physician.

— (3) ——— The employer shall provide the required medical surveillance, as set forth in Regulation .11:

— (a) ——— Without cost to employees, and

— (b) ——— At a reasonable time and place.

B. Biological Monitoring.

— (1) ——— Blood Lead and ZPP or FEP Level Sampling and Analysis: The employer shall make available to each employee covered under Section A(1), above, biological monitoring in the form of blood sampling and analysis for:

— (a) ——— Lead; and

— (b) ——— Zinc protoporphyrin (ZPP), or Free erythrocyte protoporphyrin (FEP) levels.

— (2) ——— The biological monitoring shall be provided on the following schedule:

— (a) ——— Before assignment, when an employee is being assigned for the first time to an area in which airborne concentrations of lead are at or above the PEL level;

— (b) ——— At least every 2 months during the first 6 months to each employee covered under Section A(1), above, after that, every 6 months;

— (c) ——— At least every 2 months for each employee whose last blood lead sampling and analysis indicated a blood lead level at or above 40 micrograms/100g of whole blood, until two consecutive blood samples and analysis indicate a blood lead level below 40 micrograms/100g of whole blood;

— (d) ——— At least monthly during the removal period of each employee removed from exposure to lead due to an elevated blood lead level; and

— (e) ——— At the termination of employment.

~~(3) Follow-up Blood Sampling Tests:~~

~~When the results of a blood lead level test indicate that an employee's blood lead level exceeds the numerical criteria for medical removal under Regulation .12A(1), the employer shall provide a second (follow-up) blood sampling test within 2 weeks after receiving the results of the first blood sampling test.~~

~~(4) Accuracy of Blood Lead Level Sampling and Analysis:~~

~~Blood lead level sampling and analysis provided pursuant to these regulations shall;~~

~~(a) Have an accuracy, to a confidence level of 95 percent, within plus or minus 15 percent or 6 micrograms/100ml, whichever is greater; and~~

~~(b) Be conducted by a laboratory which:~~

~~(i) Is licensed by the Centers for Disease Control (CDC), United States Department of Health and Human Services, or~~

~~(ii) Has received a satisfactory grade in blood lead proficiency testing from CDC in the prior 12 months.~~

~~(5) Employee Notification:~~

~~Within 5 working days after receiving biological monitoring results, the employer shall notify in writing:~~

~~(a) Each employee of their blood lead level; and~~

~~(b) Each employee whose blood lead level exceeds 40 micrograms/100g, that this chapter requires temporary medical removal with Medical Removal Protection benefits when an employee's blood lead level exceeds the numerical criterion for medical removal under Regulation .12A(1).~~

.11 Medical Examinations and Consultations

A. Frequency:

~~The employer shall make available medical examinations and consultations to each employee covered under Regulation .10A(1) according to the following schedule:~~

~~(1) Immediately, for each employee for whom a blood sampling test conducted at any time during the preceding 12 months indicated a blood lead level at or above 40 micrograms/100g;~~

~~(2) As soon as possible, upon notification by an employee that:~~

~~(a) The employee has developed signs or symptoms commonly associated with lead intoxication;~~

~~(b) The employee desires medical advice concerning the effects of current or past exposure to lead on the employee's ability to procreate a healthy child; or~~

~~(c) The employee has demonstrated difficulty in breathing during a respirator fit test or during respirator use; and~~

~~(3) As medically appropriate for each employee who was either:~~

~~(a) Removed from exposure to lead due to a risk of sustaining material impairment to health; or~~

(b) ~~Otherwise limited pursuant to a final medical determination.~~

B. ~~Content.~~

- ~~Medical examinations made available pursuant to Section A(1), above, shall include all of the following elements:~~
- ~~(1) A detailed work history and a medical history, with particular attention to:
 - ~~(a) Past lead exposure (occupational and non-occupational);~~
 - ~~(b) Personal habits (smoking, hygiene), and~~
 - ~~(c) Past gastrointestinal, hematologic, renal, cardiovascular, reproductive, and neurological problems;~~~~
 - ~~(2) A thorough physical examination, with particular attention to teeth, gums, hematologic, gastrointestinal, renal, cardiovascular, and neurological systems;~~
 - ~~(3) Pulmonary status, if respiratory protection will be used;~~
 - ~~(4) A blood pressure measurement;~~
 - ~~(5) A blood sample and analysis which determines:
 - ~~(a) Blood lead level which meets the requirements of Regulation .10B(4);~~
 - ~~(b) Hemoglobin and hematocrit determinations, red cell indices, and examination of peripheral smear morphology;~~
 - ~~(c) Zinc protoporphyrin or free erythrocyte protoporphyrin;~~
 - ~~(d) Blood urea nitrogen, and~~
 - ~~(e) Serum creatinine;~~~~
 - ~~(6) A routine urinalysis with microscopic examination; and~~
 - ~~(7) Any laboratory or other test which the examining physician deems necessary by sound medical practice.~~

C. ~~The content of medical examinations made available pursuant to Section A(2) and (3), above, shall:~~

- ~~(1) Be determined by an examining physician; and~~
- ~~(2) If requested by an employee, include pregnancy testing or laboratory evaluation of male fertility.~~

D. ~~Multiple Physician Review Mechanism~~

- ~~(1) If the employer selects the initial physician who conducts any medical examination or consultation provided to an employee under this chapter, the employee may designate a second physician to:
 - ~~(a) Review any findings, determinations, or recommendations of the initial physician; and~~
 - ~~(b) Conduct the examinations, consultations, and laboratory tests the second physician deems necessary to facilitate this review.~~~~

- ~~(2) The employer shall promptly notify an employee of the right to seek a second medical opinion after each occasion that an initial physician conducts a medical examination or consultation pursuant to this chapter.~~
- ~~(3) The employer may condition its participation in, and payment for, the multiple physician review mechanism upon the employee doing the following within 15 days after receipt of the foregoing notification, or receipt of the initial physician's written opinion, whichever is later:
 - ~~(a) The employee informing the employer that he or she intends to seek a second medical opinion; and~~
 - ~~(b) The employee initiating steps to make an appointment with a second physician.~~~~
- ~~(4) If the findings, determinations, or recommendations of the second physician differ from those of the initial physician, the employer and the employee shall ensure that efforts are made for the two physicians to resolve any disagreement.~~
- ~~(5) If the two physicians have been unable to reach agreement quickly, the employer and the employee, through their respective physicians, shall designate a third physician to:
 - ~~(a) Review any findings, determinations, or recommendations of the prior physicians; and~~
 - ~~(b) Conduct the examinations, consultations, and laboratory tests, and engage in discussions with the prior physicians that the third physician deems necessary to resolve disagreement of the prior physicians.~~~~
- ~~(6) The employer shall act consistently with the findings, determinations, and recommendations of the third physician, unless the employer and the employee reach an agreement which is otherwise consistent with the recommendations of at least one of the three physicians.~~

~~E. Information Provided to Examining and Consulting Physicians:~~

- ~~(1) The employer shall provide the initial physician conducting a medical examination or consultation under this chapter the following information:
 - ~~(a) A copy of this chapter;~~
 - ~~(b) A description of the affected employee's duties as they relate to the employee's lead exposure;~~
 - ~~(c) The employee's exposure level or anticipated exposure level to lead and to any other toxic substance (if applicable);~~
 - ~~(d) A description of personal protective equipment used, or to be used;~~
 - ~~(e) Prior blood lead determinations; and~~
 - ~~(f) Prior written medical opinions concerning the employee which are in the employer's possession or control.~~~~
- ~~(2) The employer shall provide the foregoing information to a second or third physician conducting a medical examination or consultation under this chapter upon request either by the second or third physician, or by the employee.~~

~~F. Written Medical Opinions:~~

- ~~(1) The employer shall obtain and furnish to the employee a copy of a written medical opinion from each examining or consulting physician which contains the following information:~~

- ~~(a) The physician's opinion as to whether the employee has any detected medical condition which would place the employee at increased risk of material impairment of the employee's health from exposure to lead;~~
- ~~(b) Any recommended special protective measures to be provided to the employee;~~
- ~~(c) Limitations to be placed upon the employee's exposure to lead;~~
- ~~(d) Any recommended limitation upon the employee's use of respirators, including, if a physician determines that the employee cannot wear a negative pressure respirator, a determination of whether the employee can wear a powered air purifying respirator; and~~
- ~~(e) The results of the blood lead determinations;~~
- ~~(2) The employer shall instruct each examining and consulting physician:~~
 - ~~(a) Not to reveal either in the written opinion, or in any other means of communication with the employer, any finding, including laboratory results, or diagnosis unrelated to an employee's occupational exposure to lead; and~~
 - ~~(b) To advise the employee of any medical condition, occupational or non-occupational, which dictates further medical examination or treatment.~~

G. Alternate Physician Determination Mechanism:

~~The employer and the employee or authorized employee representative may agree to use any expeditious alternate physician determination mechanism in place of the multiple physician review mechanism provided by this chapter, provided that the alternate mechanism satisfies the other requirements contained in this chapter.~~

H. Chelation:

- ~~(1) The employer shall ensure that any person whom he retains, employs, supervises, or controls does not engage in prophylactic chelation of any employee at any time.~~
- ~~(2) If therapeutic or diagnostic chelation is to be performed by any person in Section H(1); above, the employer shall ensure that:~~
 - ~~(a) It is done:~~
 - ~~(i) Under the supervision of a licensed physician;~~
 - ~~(ii) In a clinical setting;~~
 - ~~(iii) With thorough and appropriate medical monitoring; and~~
 - ~~(b) The employee is notified in writing before its occurrence.~~

.12 Medical Removal Protection

A. Temporary Medical Removal and Return of an Employee:

~~(1) Temporary Removal Due to Elevated Blood Lead Levels:~~

~~The employer shall remove an employee from work having an exposure to lead at or above the action level on each occasion that:~~

- ~~(a) A periodic and a follow-up blood sampling test conducted pursuant to Regulations .10 and .11 indicates that the employee's blood lead level is at or above 50 micrograms/100g; or~~

(2) Temporary Removal Due to a Final Medical Determination

(a) For the purposes of Section A(2), the phrase "final medical determination" means the outcome of either the multiple physician review mechanism or the alternate medical determination mechanism used pursuant to the medical surveillance provisions in Regulation .11, above.

(b) The employer shall remove an employee from work having an exposure to lead at or above the PEL level on each occasion that a final medical determination results in a medical finding, determination, or opinion that the employee has a detected medical condition which places the employee at increased risk of material health impairment from exposure to lead.

(c) When a final medical determination results in any recommended special protective measures for an employee, or limitations on an employee's exposure to lead, the employer shall implement the recommendations and act consistently with it.

(3) Return of the Employee to Former Job Status

(a) The employer shall return an employee to his or her former job status in accordance with the following schedule:

(i) For an employee removed pursuant to Section A(1), when two consecutive blood sampling tests taken at least one month apart indicate that the employee's blood lead level is at or below 40 micrograms/100g of whole blood;

(ii) For an employee removed pursuant to Section A(2), when a subsequent final medical determination results in a medical finding, determination, or opinion that the employee no longer has a detected medical condition which places the employee at increased risk of material health impairment from exposure to lead.

(b) For the purposes of this subsection, the requirement that an employer return an employee to the employee's former job status is not intended to expand upon or restrict any rights an employee has or would have had, absent temporary medical removal, to a specific job classification or position under the terms of a collective bargaining agreement.

(4) Removal of Other Employee Special Protective Measures or Limitations

The employer shall remove any limitations placed on an employee or end any special protective measures provided to an employee pursuant to a final medical determination when a subsequent final medical determination indicates that the limitations or special protective measures are no longer necessary.

(5) Employer Options Pending a Final Medical Determination

When a multiple physician review mechanism, or alternate medical determination mechanism used pursuant to Regulation .11, has not yet resulted in a final medical determination with respect to an employee, the employer shall act as follows:

(a) Removal. The employer may remove the employee from exposure to lead, provide special protective measures to the employee, or place limitations upon the employee, consistent with the medical findings, determinations, or recommendations of any of the physicians who have reviewed the employee's health status.

(b) Return. The employer may return the employee to his or her former job status, end any special protective measures provided to the employee, and remove any limitations placed upon the employee, consistent with the medical findings,

determinations, or recommendations of any of the physicians who have reviewed the employee's health status, with two exceptions:

- (i) If the initial removal, special protection, or limitations of the employee resulted from a final medical determination which differed from the findings, determinations, or recommendations of the initial physician; or
- (ii) If the employee has been on removal status for the preceding 18 months due to an elevated blood lead level, the employer shall await a final medical determination.

B. Medical Removal Protection Benefits:

(1) Definition of Medical Removal Protection Benefits:

For the purpose of this section, the requirements that an employer provide medical removal protection benefits means that an employer shall maintain the earnings, seniority, and other employment rights and benefits of an employee as though the employee had not been removed from normal exposure to lead or otherwise limited.

(2) Provision of Medical Removal Protection Benefits:

The employer shall provide to an employee up to 18 months of medical removal protection benefits on each occasion that an employee is removed from exposure to lead or otherwise limited pursuant to this chapter.

(3) Follow-up Medical Surveillance During the Period of Employee Removal or Limitation:

During the period of time that an employee is removed from normal exposure to lead, or otherwise limited, the employer may condition the provision of medical removal protection benefits upon the employee's participation in follow-up medical surveillance made available pursuant to this regulation.

(4) Workers' Compensation Claims:

If a removed employee files a claim for workers' compensation payments for a lead-related disability:

- (a) The employer shall continue to provide medical removal protection benefits pending disposition of the claim;
- (b) To the extent that an award is made to the employee for earnings lost during the period of removal, the employer's medical removal protection obligation shall be reduced by the amount of the award; and
- (c) The employer shall receive no credit for workers' compensation payments received by the employee for treatment-related expenses.

(5) Other Credits:

The employer's obligation to provide medical removal protection benefits to a removed employee shall be reduced to the extent that the employee receives:

- (a) Compensation for earnings lost during the period of removal either from a publicly or employer-funded made possible by virtue of the employee's removal;
- (b) Income from employment with another employer compensation program; or

(6) Employees Whose Blood Lead Levels Do Not Adequately Decline Within 18 Months of Removal:

- ~~(a) The employer shall take the measures prescribed by Section B(6)(b) with respect to any employee:
 - ~~(i) Removed from exposure to lead due to an elevated blood lead level; and~~
 - ~~(ii) Whose blood lead level has not declined within the past 18 months of removal so that the employee has been returned to the employee's former job status.~~~~
- ~~(b) The employer shall:
 - ~~(i) Make available to the employee a medical examination pursuant to this chapter to obtain a final medical determination with respect to the employee;~~
 - ~~(ii) Ensure that the final medical determination obtained indicates whether the employee may be returned to his or her former job status, and if not, what steps should be taken to protect the employee's health;~~
 - ~~(iii) When the final medical determination has not yet been obtained, or once obtained indicates that the employee may not yet be returned to the employee's former job status, continue to provide medical removal protection benefits to the employee until either the employee is returned to former job status, or a final medical determination is made that the employee is incapable of ever safely returning to the employee's former job status.~~~~
- ~~(c) When the employer acts pursuant to a final medical determination which permits the return of the employee to the employee's former job status despite what would otherwise be an unacceptable blood lead level, later questions concerning removing the employee again shall be decided by a final medical determination.~~
- ~~(d) The employer need not automatically remove the employee pursuant to the blood lead level removal criteria provided by this regulation.~~

~~(7) Voluntary Removal or Restriction of An Employee.~~

~~Where an employer, although not required by this regulation to do so, removes an employee from exposure to lead or otherwise places limitations on an employee due to the effects of lead exposure on the employee's medical condition, the employer shall provide medical removal protection benefits to the employee equal to that required by Section B(2).~~

13 Employee Information and Training

A. Training Program

- ~~(1) Each employer who has a jobsite in which there is a potential exposure to airborne lead at any level shall inform employees of this chapter.~~
- ~~(2) The employer shall:
 - ~~(a) Institute a training program for employees subject to:
 - ~~(i) Lead exposure at or above the action level; or~~
 - ~~(ii) The possibility of skin or eye irritation; and~~~~
 - ~~(b) Ensure their participation in the training.~~~~
- ~~(3) The employer shall provide initial training for those employees covered by Section A(2), above, before the time of initial job assignment.~~

- ~~(4) The training program shall be repeated at least annually for each employee.~~
- ~~(5) The employer shall ensure that each employee is informed of:
 - ~~(a) The content of this chapter;~~
 - ~~(b) The specific nature of the operations which could result in exposure to lead above the action level;~~
 - ~~(c) The purpose, proper selection, fitting, use, and limitation of respirators;~~
 - ~~(d) The purpose and a description of:
 - ~~(i) The medical surveillance program, and~~
 - ~~(ii) The medical removal protection program;~~~~
 - ~~(e) The adverse health effects associated with excessive exposure to lead, with particular attention to the adverse reproductive effects on both males and females;~~
 - ~~(f) The Engineering controls and work practices associated with the employee's job assignment;~~
 - ~~(g) The contents of any compliance program in effect, and~~
 - ~~(h) Instructions to employees that chelating agents should not:
 - ~~(i) Routinely be used to remove lead from their bodies, and~~
 - ~~(ii) Be used at all except under the direction of a licensed physician.~~~~~~
- ~~(6) The employer shall:
 - ~~(a) Obtain and include as part of the training program, the materials pertaining to the Federal Occupational Safety and Health Act, the regulations issued under the Act, and this chapter; and~~
 - ~~(b) Distribute them to employees.~~~~

B. Access to Information and Training Materials

- ~~(1) The employer shall make readily available to all affected employees a copy of this chapter.~~
- ~~(2) The employer shall provide to the Department upon request, all materials relating to the employee information and training program.~~

.14 Signs

A. General

- ~~(1) The employer may use signs required by other statutes, regulations, or ordinances in addition to, or in combination with, signs required by this regulation.~~
- ~~(2) The employer shall ensure that no statement appears on or near any sign required by this regulation which contradicts or detracts from the meaning of the required sign.~~

B. Signs

- ~~(1) The employer shall post the following warning sign in each work area where the PEL is exceeded:~~

~~WARNING~~

~~HAZARD~~

~~LEAD WORK AREA~~

~~NO SMOKING, EATING OR DRINKING~~

- ~~(2) The employer shall ensure that signs required by this regulation are illuminated and cleaned as necessary so that the legend is readily visible.~~

15 Recordkeeping

A. Initial Determination and Exposure Monitoring

- ~~(1) The employer shall establish and maintain an accurate record of:~~

~~(a) Initial determinations; and~~

~~(b) All monitoring required in Regulation .04.~~

- ~~(2) This record shall include:~~

~~(a) The information required in Regulation .04;~~

~~(b) For each sample taken:~~

~~(i) The date, or dates;~~

~~(ii) The number of samples;~~

~~(iii) The duration of sampling;~~

~~(iv) The location;~~

~~(v) The results on each sample taken; and~~

~~(vi) Where applicable, a description of the sampling procedure used to determine representative employee exposure;~~

~~(c) A description of the sampling and analytical methods used and evidence of their accuracy;~~

~~(d) The type of respiratory protective devices worn, if any;~~

~~(e) Name, social security number, and job classification of the employee monitored and of all other employees whose exposure the measurement is intended to represent; and~~

~~(f) The environmental variables that could affect the measurement of employee exposure.~~

- ~~(3) The employer shall maintain the initial determination and exposure monitoring records for the longer of:~~

~~(a) 40 years; or~~

~~(b) The duration of employment plus 20 years.~~

B. Medical Surveillance

- ~~— (1) — The employer shall establish and maintain an accurate record for each employee subject to medical surveillance as required by Regulations .10 and .11.~~
- ~~— (2) — This record shall include:~~
 - ~~— (a) — The name, social security number, and a description of the duties of the employee;~~
 - ~~— (b) — One copy of each physician's written opinion;~~
 - ~~— (c) — Results of any airborne exposure monitoring conducted for that employee and the representative exposure levels supplied to the physician; and~~
 - ~~— (d) — Any employee medical complaints related to exposure to lead.~~
- ~~— (3) — The employer shall keep, or ensure that the examining physician keeps, the following medical records;~~
 - ~~— (a) — A copy of the medical examination results, including medical and work history, required under Regulations .10 and .11.~~
 - ~~— (b) — A description of the laboratory procedures together with a copy of any standards or guidelines used to interpret the test results or references to that information; and~~
 - ~~— (c) — A copy of the results of biological monitoring.~~
- ~~— (4) — The employer shall maintain or ensure that the physician maintains the medical records for at least 40 years, or for the duration of employment plus 20 years, whichever is longer.~~

C. Medical Removals

- ~~— (1) — The employer shall establish and maintain an accurate record for each employee removed from current exposure to lead pursuant to Regulation .12.~~
- ~~— (2) — Each record shall include:~~
 - ~~— (a) — The name and social security number of the employee;~~
 - ~~— (b) — The date of each occasion on which the employee was removed from exposure to lead, together with the corresponding date on which the employee was returned to his or her former job status;~~
 - ~~— (c) — A brief explanation of how each removal was, or is being, accomplished; and~~
 - ~~— (d) — A statement with respect to each removal indicating whether the reason for the removal was an elevated blood lead level.~~
- ~~— (3) — The employer shall maintain each medical removal record for at least the duration of an employee's employment.~~

D. Availability

- ~~— (1) — Upon request, the employer shall make all records required by this chapter available to the Department for examination and copying.~~
- ~~— (2) — Upon request, the employer shall make environmental monitoring, biological monitoring, and medical removal records required by this chapter available to affected employees or their authorized employee representative for inspection and copying.~~
- ~~— (3) — Upon request, the employer shall make an employee's medical records required to be maintained by this regulation available to the affected employee or former employee, or to~~

~~a physician or other individual designated by the affected or former employee for examination and copying.~~

E. Transfer of Records

- ~~(1) When the employer ceases to do business:~~
 - ~~(a) The successor employer shall receive and retain all records required by this chapter.~~
 - ~~(b) If there is no successor employer to receive the records required by this chapter and to retain them for the prescribed retention period, the employer shall transmit these records to the Department.~~
- ~~(2) At the expiration of the record retention period prescribed by this chapter, the employer shall:~~
 - ~~(a) Notify the Department at least 3 months before the disposal of the records; and~~
 - ~~(b) Transmit the records to the Department if requested within the period.~~

.16 Observation of Monitoring

A. Employee Observation

- ~~The employer shall provide affected employees or their designated representative an opportunity to observe monitoring of employee exposure to lead conducted pursuant to Regulation .04.~~

B. Observation Procedures

- ~~(1) When observation of the monitoring of employee exposure to lead requires entry into an area where the use of respirators, protective clothing, or equipment is required, the employer shall:~~
 - ~~(a) Provide the observer with and ensure the use of the respirators, clothing, and equipment; and~~
 - ~~(b) Require the observer to comply with all other applicable safety and health procedures.~~
- ~~(2) Without interfering with the monitoring, observers shall be entitled to:~~
 - ~~(a) Receive an explanation of the measurement procedures;~~
 - ~~(b) Observe all steps related to the monitoring of lead performed at the place of exposure; and~~
 - ~~(c) Record the results obtained or receive copies of the results when returned by the laboratory.~~

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SCHEDULE OF ITEMS

PAGE: 1
DATE:

CONTRACT ID: T201407501.01 PROJECT(S): T201407501

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
SECTION 0001 NON-FIXED QUANTITIES						
0010	201000 CLEARING AND GRUBBING	LUMP	LUMP			
0020	202000 EXCAVATION AND EMBANKMENT	50.000 CY				
0030	207500 COFFERDAMS	LUMP	LUMP			
0040	209002 BORROW, TYPE B	10.000 CY				
0050	209006 BORROW, TYPE F	110.000 CY				
0060	211000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP	LUMP			
0080	712021 RIPRAP, R-5	1210.000 TON				
0090	720050 GALVANIZED STEEL BEAM GUARDRAIL, TYPE 1-31	112.500 LF				
0100	726001 END ANCHORAGE 31	1.000 EACH				

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SCHEDULE OF ITEMS

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0110	743000 MAINTENANCE OF TRAFFIC	LUMP	LUMP			
0120	743006 PLASTIC DRUMS	952.000 EADY				
0130	743023 TEMPORARY BARRICADES, TYPE III	408.000 LFDY				
0140	743024 TEMPORARY WARNING SIGNS AND PLAQUES	408.000 EADY				
0150	743051 FLAGGER, KENT COUNTY, STATE	320.000 HOUR				
0160	743063 FLAGGER, KENT COUNTY, STATE, OVERTIME	80.000 HOUR				
0170	749687 INSTALLATION OR REMOVAL OF TRAFFIC SIGN(S) ON SINGLE SIGN POST	9.000 EACH				
0180	749690 INSTALLATION OR REMOVAL OF TRAFFIC SIGNS ON MULTIPLE SIGN POSTS	8.000 SF				
0190	758000 REMOVAL OF EXISTING PORTLAND CEMENTCONCRETE PAVEMENT, CURB, SIDEWALK, ETC.	75.000 SY				
0200	762001 SAW CUTTING, BITUMINOUS CONCRETE	150.000 LF				

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0210	762002 SAW CUTTING, CONCRETE, FULL DEPTH	25.000 LF				
0220	763000 INITIAL EXPENSE	LUMP	LUMP			
0230	763501 CONSTRUCTION ENGINEERING	LUMP	LUMP			
0240	905001 SILT FENCE	250.000 LF				
0250	906001 PORTABLE SEDIMENT TANK	2.000 EACH				
0260	906003 SUMP PIT	2.000 EACH				
0270	908001 TOPSOIL (TON)	115.000 TON				
0280	908004 TOPSOIL, 6" DEPTH	700.000 SY				
0290	908017 TEMPORARY GRASS SEEDING	1400.000 SY				
0300	908019 STREAMBANK SEED MIX, SEEDING	1400.000 SY				

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SCHEDULE OF ITEMS

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CONTRACTOR : _____

LINE NO	ITEM DESCRIPTION	APPROX. QUANTITY AND UNITS	UNIT PRICE		BID AMOUNT	
			DOLLARS	CTS	DOLLARS	CTS
0310	908020 EROSION CONTROL BLANKET MULCH	965.000 SY				
0320	909004 TURBIDITY CURTAIN, FLOATING	400.000 LF				
	SECTION 0001 TOTAL					
	TOTAL BID					